

Application No.: 09/453,319

Docket No.: 64631-0020

REMARKS

Claim 29 has been cancelled and claims 1 and 18 have been amended. No new claims have been added. Accordingly, claims 1-28 remain under prosecution in this application.

In the Specification

The first page of page 4 has been amended to specifically state that the method and apparatus of the present invention perform a nondestructive test. The claims as originally filed in this application use the phrase "non-destructive" and accordingly by adding the first sentence of paragraph does not add new subject matter. However, to make clear what the present application defines as non-destructive, the undersigned has added two more sentences to clarify that when "non-destructive" is used in this application, it means that the defect in the specimen is not any worse after the "non-destructive" test was conducted than it was before the test was conducted. Thus, when the claimed apparatus or the claimed method of the present invention is used, there is no migration of a defect.

Claim Objections

The Examiner has objected to the attempt to add new claim 24 in the previous amendment (paper no. 19). The Examiner correctly points out that this new claim should have been new claim 29 inasmuch as there was already a claim 24 of record. The undersigned notes the Examiner's renumbering of misnumbered claim 24 as claim 29 and the undersigned hereby cancels claim 29.

35 USC §102

Claims 1, 3, 18-19, 27-28 are rejected under 35 USC §102 as anticipated by Devitt et al. Devitt discloses in Figure 1 a device and method of applying a mechanical stress in a way that causes the surface of a specimen to be put into tension to "open the crack so that it will be detectable at the component surface 18." (column 7, lines 32-34). It is clear from the context of Devitt that it is not directed to a method or an apparatus for detecting kissing unbond defects. It is clear that if a kissing unbond defect is tensioned in the way taught by Devitt, it would draw

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the surfaces surrounding the unbond defect tighter against one another, thereby reducing (lessening) to the thermal discontinuity (not exacerbating the discontinuity). It is obvious that there are only two possible ways to practice the Devitt teaching to "open the crack so that it will be detectable at the component surface." The first way is to stress the sample such that a crack which is already present at the sample surface (is made larger). The second possible way to "open a crack so that it is detectable at a component surface" is to stress the specimen such that a subsurface crack (i.e. a crack which resides solely below the surface of the specimen and does not, in any way, penetrate to the surface of the specimen) is caused to migrate to, and evidence itself at, the surface of the specimen. In the first scenario, a crack which resides at the surface of the specimen (but is just not detectable without stressing the specimen) is not, by definition, a subsurface defect. Both claims 1 and 18 state that this is a method and apparatus for detecting subsurface kissing unbond defects. In the second scenario, where a sample is stressed such that what started out as a subsurface crack has now migrated to the surface, cannot be fairly classified as a nondestructive test (the test causes the crack to penetrate or migrate into an area of the specimen where it did not exist prior to the test). Both claim 1 and 18 specifically state that the force applied is "insufficient to cause the subsurface unbond defect to migrate toward the specimen surface." Thus, at least for the two reasons set forth above, the undersigned does not believe that Devitt teaches or suggests the claimed invention.

In view of the above referenced amendments and arguments, the undersigned respectfully solicits the allowance of this application.

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Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. 64631-0020 from which the undersigned is authorized to draw.

Dated: October 22, 2003

Respectfully submitted,

By

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